

In the Claims:

Please cancel claims 2-51, without prejudice to or disclaimer of the subject matter contained therein.

Please add the following new claims:

52. (New) A method for synthesizing one or more nucleic acid molecules comprising one or more recombination sites, said method comprising:

- (a) obtaining at least one linear nucleic acid molecule;
- (b) contacting said molecule with one or more adapters which comprise at least a first recombination site or portions thereof under conditions sufficient to add one or more of said adapters to one or more termini of said linear nucleic acid molecule; and
- (c) mixing said linear nucleic acid molecule with at least one vector in the presence of at least one recombination protein, under conditions sufficient to cause recombination of said linear nucleic acid molecule with said vector.

53. (New) The method of claim 52, wherein said linear nucleic acid molecule is a genomic DNA molecule.

54. (New) The method of claim 52, wherein said linear nucleic acid molecule is a cDNA molecule.

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55. (New) The method of claim 52, wherein said linear nucleic acid molecule is produced by mechanical or enzymatic techniques.

56. (New) The method of claim 52, wherein said linear nucleic acid molecule is produced by digesting one or more nucleic acid molecules with one or more restriction endonucleases.

57. (New) The method of claim 52, wherein at least one adaptor comprising at least one recombination site or portion thereof is added to both termini of said linear nucleic acid molecule.

58. (New) The method of claim 57, wherein the recombination sites or portions thereof at both termini of said linear nucleic acid molecule are different from each other.

59. (New) The method of claim 58, wherein said recombination sites or portions thereof do not substantially recombine with each other.

60. (New) The method of claim 52, wherein said vector comprises at least a second recombination site or portion thereof.

61. (New) The method of claim 60, wherein said first and/or second recombination sites or portions thereof are engineered recombination sites.

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62. (New) The method of claim 60, wherein said first and/or second recombination sites or portions thereof are selected from the group consisting of *att* and *lox*.

63. (New) The method of claim 60, wherein said first and/or second recombination sites or portions thereof are *att* sites.

64. (New) The method of claim 52, wherein said recombination protein is selected from the group consisting of Cre, Int, IHF, Xis and Fis.

65. (New) The method of claim 52, wherein said recombination protein is Int.

66. (New) The method of claim 52, wherein said recombination results in the production of a vector comprising said at least of said one linear nucleic acid molecules.

67. (New) The method of claim 52, wherein said at least one linear nucleic acid molecule is a population of nucleic acid molecules.

68. (New) The method of claim 52, wherein said at least one linear nucleic acid molecule is a library of nucleic acid molecules.

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